CLAIMS

1. A method of forming a weld between workpieces over a joint region, the method comprising:

exposing the joint region to incident radiation having a wavelength outside the visible range so as to cause melting of the surface of one or both workpieces at the joint region, and allowing the melted material to cool thereby welding the workpieces together, the method further comprising providing a radiation absorbing material at the joint region in one of the workpieces or between the workpieces which has an absorption band matched to the wavelength of the incident radiation so as to absorb the incident radiation and generate heat for the melting process, the absorption band being substantially outside the visible range so that the material does not affect the appearance of the joint region or the workpieces in visible light.

2. A method according to claim 1, wherein the radiation absorbing material is sandwiched between two workpieces.

3. A method according to claim 1, wherein the radiation absorbing material is provided in at least one of the workpieces.

4. A method according to claim 1, wherein the radiation absorbing material is provided on the substrate by moulding the substrate in a mould with an insert formed by or including the radiation absorbent material.

5. A method according to claim 1, wherein the radiation absorbent material is provided as a coating on the substrate.

6. A method according to claim 1, wherein the radiation absorbent material is provided by coextruding the material with the substrate.

7. A method according to any of the preceding claims, wherein the radiation absorbing material is exposed to radiation prior to positioning the workpieces together.

8. A method according to any of the preceding claims, wherein the radiation absorbing material is exposed to radiation through one of the workpieces.

9. A method according to any of the preceding claims, wherein the workpieces are made of plastics.

10. A method according to any of the preceding claims, wherein the radiation absorbing material is a radiation absorbing dye.

11. A method according to any of the preceding claims, wherein the lower limit of the absorption band is above 700nm.

12. A method according to claim 11, wherein the absorption band defines the range 780-1100nm.

13. A method according to any of claims 1 to 11, wherein the absorption band defines the range 820-860nm.

14. A method according to any of claims 1 to 11, wherein the absorption band lies in the infrared range.

15. A method according to any of the preceding claims, wherein the absorption band does not include the range 400-700nm.

16. A method according to any of the preceding claims, wherein the radiation is in the infrared range.

17. A method according to any of the preceding claims, wherein the wavelength of the incident radiation lies in the range 700-2500nm.

18. A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 790-860nm.

19. A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 940-980nm.

20. A method according to any of the preceding claims, wherein the radiation is a laser beam.

21. A pair of workpieces which have been welded by a method according to any of the preceding claims.